

Amendments to the Claims:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A copper alloy comprising:
2.0 to 4.0 mass% of Ti;
not more than 0.1 mass% in total of unavoidable impurity elements consisting of Pb, Sn, Zn, Mn, Fe, Co, Ni, S, Si, Al, P, As, Se, Te, Sb, Bi, Au, and Ag, each unavoidable impurity element being contained at not more than 0.01 mass%; and
second-phase particles ~~formed by Cu, Ti, and the unavoidable impurity elements;~~represented by Cu-Ti-X system particles, wherein X is selected from the group consisting of Pb, Sn, Zn, Mn, Fe, Co, Ni, S, Si, Al, P, As, Se, Te, Sb, Bi, Au, and Ag;
wherein the second-phase particles have an area of not less than $0.01 \mu\text{m}^2$ observed by a cross section speculum, and not less than 80% of the number of the second-phase particles contain not less than 3% in total amount of the unavoidable impurity elements in composition.
2. (Original) The copper alloy according to claim 1, wherein when the second-phase particles of not less than $0.01 \mu\text{m}^2$ area observed by a cross section speculum is assumed to be a circle having a diameter of D, the diameter D is 0.2 to $1.0 \mu\text{m}$.
3. (Currently Amended) The copper alloy according to claim 1, wherein the second-phase particle has:
a particle density ρ , of second-phase particles of area of not less than $0.01 \mu\text{m}^2$ observed by the cross section speculum, is 1 to 100 particles per $100 \mu\text{m}^2$; and
an average distance of particles d defined by the following formula, wherein the average distance of particles d is 2 to $20 \mu\text{m}$:

$$d = \frac{1}{n} \sum_i^n \left(\frac{1}{10} \sum_j^{10} d_{ij} \right) = \frac{1}{n} \sum_i^n \left(\frac{1}{10} \sum_j^{10} |\vec{P}_{ij} - \vec{P}_i| \right)$$

di1: distance from arbitrary second-phase particle P_i ($i=1, 2, \dots, n$) to the second-phase particle P_{i1} which is the closest to P_i

di2: distance from P_i to the second-phase particle P_{i2} which is close to the second to P_i

dij (no repetition): distance from P_i to the second-phase particle P_{ij} which is close to the j-th to P_i

d: average distance of particles (above formula)

n: sufficiently large number, statistically of at least 10.